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ATTACHMENT STYLES AND PSYCHOLOGICAL PROFILES OF CHILD SEX OFFENDERS IN IRELAND

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ABSTRACT

Objective. This study aimed to profile the attachment style and psychological characteristics of a group of Irish child sex offenders.

Method. Profiles of 29 child sex offenders, 30 violent offenders, 30 non-violent offenders and 30 community controls were compared. Measures used included the Experiences in Close Relationships scale, the Parental Bonding Instrument, the UCLA Emotional Loneliness Scale, the Nowicki -Strickland Locus of Control scale, and the Novaco Anger Scale.

Results. A secure adult attachment style was four times less common in the child sex offender group than in any of the other three groups. 93% of sex offenders had an insecure adult attachment style and the majority (59%) had a fearful-insecure attachment style. Compared with community controls, the child sex offender group reported significantly lower levels of maternal and paternal care and significantly higher levels of maternal and paternal overprotection during their childhood. Compared with all three comparison groups, the child sexual offenders reported significantly more emotional loneliness and a more external locus of control. With respect to anger management, the child sexual offenders' profile more closely approximated those of non-violent offenders and community controls than that of violent offenders.

Conclusions. Insecure attachment was a vulnerability factor uniquely associated with child sex offending in this study. Compared with violent and non-violent offenders and community controls, the child sexual offenders evaluated in this study were also characterized by poorer psychosocial adjustment and an anger management profile closer to the normal range than that of violent offenders.

INTRODUCTION

In Ireland child sexual abuse (CSA) is a widespread problem (O'Reilly & Carr, 1999). Recently, prison-based (Murphy, 1998; O'Reilly, Murphy, Cotter, & Carr, 2000) and community-based (Keenan, 1998; Travers, 1998; Walsh, 1998) treatment programmes for child sex offenders grounded in international best practices have been developed in Ireland. However, with the exception of a couple of studies of adolescents with a history of sexual offending (O'Halloran, Carr, O'Reilly, Sheerin, Cherry, Turner, Beckett, & Brown, 2002; O'Reilly, Sheridan, Carr, Cherry, Donohoe, McGrath, Phelan, Tallon, O'Reilly, 1998) there is dearth of research on the psychological profiles of Irish child sex offenders. Such research is essential for the refinement of assessment and treatment protocols for Irish sex offenders and for informing prevention practices.

The aim of the present study was to take a first step towards psychologically profiling a group of Irish sex offenders. In pursuing this objective our research has been informed by the overarching theoretical framework of Bill Marshall and his colleagues (Barbaree, Marshall & McCormick, 1998; Marshall, 1989, 1993; Marshall & Barbaree, 1990; Ward, Hudson, Marshall, & Siegert, 1995). They argue that sexual offenders' failure to form early secure attachments with their parents leads them to develop insecure adult attachment styles. This compromises their capacity to make and maintain stable and satisfying romantic relationships. Insecure adult attachment styles are also associated with the development of a host of other psychosocial deficits such as loneliness, a sense of powerlessness, and difficulties with managing frustration, anger and interpersonal conflict. One consequence of intimacy skills deficits and the subsequent experience of loneliness is that child sexual offenders engage in coercive sexual activities with children in order to satisfy their emotional needs. Sexual offending is a distorted attempt to seek interpersonal closeness in the absence of the ability to form appropriate relationships. Marshall argues that the development of an insecure attachment style renders people vulnerable to child sex offending. When people with this vulnerability are exposed to other biological, social cultural, and situational predisposing or precipitating factors, they are more likely than people without this attachment style vulnerability to engage in child sexual abuse. Once a sexual offence has been perpetrated, memories are established which may be elaborated into inappropriate sexual fantasies, thus leading to urges to re-offend. In addition, offenders employ a number of cognitive distortions such as minimisation or victim blaming, in order to reduce feelings of guilt and fear of being caught, thus, allowing the cycle of sexual offending to repeat.

This general theory of sexual offending is supported by a considerable body or empirical research. There is evidence that child sex offenders have a history of problematic parent-child relationships (e.g. Graves et al., 1996; Jonson –Reid & Way, 2001; Levant & Bass, 1991; Marshall, Serran & Cortini, 2000; Smallbone & Dadds, 1998, 2000; Tingle, Barnard, Robbins, Newman, & Hutchinson, 1986) and emotional loneliness across the life span (e.g. Bumby & Hansen, 1997; Bumby & Marshall, 1994; Garlick, Marshall, & Thornton, 1996; Marshall, 1989; Seidman, Marshall, Hudson & Robertson, 1994). There is also evidence that child sex offenders have an external locus of control (Beck-Saunder, 1995; Fisher, Beech & Brown, 1998) and that their anger management profiles more closely approximated those of non-violent offenders and community controls than those of violent offenders (e.g. Dalton, Blain & Bezier, 1998; Hudson & Ward, 1997; O'Halloran, Carr et al., 2000; Seidman, Marshall, Hudson, & Robertson, 1994).

Attachment style, a pivotal variable within Marshall's overarching framework, has been idenitified by others as central to the etiology of sexual offending. Smallbone and Dadds (1998; 2000) argue that the link

between attachment style and sexual offending occurs because there is a degree of overlap between the attachment, parenting and sexuality systems and that children who experience child abuse may develop a disorganized attachment style which determines their behaviour when they experience high levels of stress. In adulthood, according to this theory, child sexual abuse occurs when individuals with such disorganized attachment styles experience stress in situations where they also have close proximity to a potential child victim.

Ward, Hudson, Marshall and Siegert (1995) have further specified the theoretical links between particular attachment styles, particular interpersonal goals and strategies, and specific forms of sexual offending behaviour. Their theoretical predications are based on Bartholomew's two dimensional model in which four attachment styles are defined with respect to positive or negative working models of self and others (Bartholomew & Horowitz, 1991). Positive working models of self and others typify the secure attachment style, a style associated with satisfying relationships. Negative working models of self and others characterize a fearful-avoidant attachment style. Men with fearful-avoidant attachment styles recognize their need for intimacy yet fear closeness to others, and so commit single offences against children or adults seeking to experience sex while avoiding intimacy. A negative view of self and a positive but guarded view of others typify an anxious-preoccupied attachment style. Individuals with this style engage in child sexual abuse in an attempt to have intimacy needs satisfied without fear of rejection. The child is construed as a lover, with the sexual abuse occurring only after some period of courtship like behaviour. A positive view of self and a negative view of others are held by those with a dismissing-avoidant attachment style, a style that is predicted to be associated with adult rape. In keeping with these predictions Ward, Hudson and Marshall (1996) found that child sexual offenders were predominantly classified as having preoccupied or fearful styles of attachment, while rapists were predominantly classified as have dismissing-avoidant attachment styles. Jamieson and Marshall (2000) found that the majority of extra-familial child sexual offenders had a fearful style of attachment.

DESIGN AND HYPOTHESES

A four-group comparative cross-sectional design was used in this study which permitted comparisons to be made between child sex offenders, violent offenders, non-violent offenders and community controls on measures of adult attachment, current emotional loneliness, locus of control and anger management. It was expected that the child sex offenders would show a greater rate of fearful-avoidant and preoccupied attachment styles, greater loneliness, and a more external locus of control. It was also expected that they would report less abnormal anger management strategies than violent offenders.

METHOD

PARTICIPANTS

Three groups of imprisoned offenders and a community control group each containing 30 members (except the child sex offender group which had 29) participated in this study. The first group consisted of child sexual offenders who were assessed just prior to entering a voluntary prison-based sexual offending treatment program in Dublin. Participation in the study was requested of all men who were entering the treatment program. None declined. The second and third groups consisted of offenders convicted of violent and non-

violent crimes respectively. They were recruited from four Irish prisons. The control group were recruited from a vocational training centre in Dublin, a university research participants' panel and a wholesale company. The offences committed by the child sexual offenders were serious and usually repeated crimes involving contact and included behaviours such as molestation, masturbation, intercourse, and sodomy. Offenders used a variety of methods of coercion from grooming and interpersonal manipulation to threats and physical force. Sixteen men in this group had perpetrated intra-familial offences. The remainder had perpetrated extra-familial offences. Four of those in the sex offender group had previous convictions for sexual offences. Six had previous convictions for non-sexual crimes (including burglary, larceny, assault, and being drunk and disorderly). None of the sex offender group had prior convictions for both sexual and non-sexual crimes. The average sentence length for current sexual convictions was 5.79 years (ranging from 3 to 12 years). One person was serving a life sentence. The violent offenders had all committed offences that involved either a physical assault on another person, including murder or attempted murder, or crimes such as armed kidnap or armed robbery. The non-violent offenders had been convicted of driving offences, larceny, theft, handling stolen goods, fraud and/or drug related crimes. Burglary was excluded from this category. Violent and non-offenders with a known history of sexual assault were excluded from the study. Offenders with insufficient literacy skills to complete the questionnaires were excluded from the study.

Demographic characteristics of the four groups are given in Table 1. From this Table it may be seen that the four groups were not matched for age or SES. The child sex offenders and the community controls were on average10 or more years older than the non-violent and violent offenders. The community control group contained more members in the lower professional and semiskilled categories than the other three groups.

INSTRUMENTS

The following questionnaires were used in the study to evaluate attachment style, recollection of parent-child relationship difficulties, current emotional loneliness, locus of control and anger management.

- Experiences in Close Relationships Inventory (ECRI, Brennan, Clark & Shaver, 1998).
- Parental Bonding Instrument (PBI, Parker, Tupling & Brown, 1979)
- The University of California Los Angeles (UCLA) Emotional Loneliness Scale (EL, Russell, Peplau, & Cutrona, 1980).
- The Nowicki-Strickland Locus of Control Scale (LOC, Nowicki, 1976)
- Novaco Anger Scale (NAS, Novaco, 1996)
- Personal Reaction Inventory (Social Desirability Scale, Beckett, Beach, Fisher & Fordham, 1994)
- Demographic questionnaire.

What follows is a brief account of each instrument.

Experiences in Close Relationships scale

This 36-item measure of adult romantic attachment yields scores on interpersonal anxiety and interpersonal avoidance dimensions (Brennan, Clark & Shaver, 1998). On the basis of scores on these two dimensions using an SPSS algorithm (Brennan, Clark & Shaver, 1998, p71-73) cases may be assigned to one of four adult attachment style categories consistent with recent elaborations of Bowlby's (1969,1973,1980)

attachment theory (Cassidy & Shaver, 1999). These categories are labelled secure, fearful, dismissive and preoccupied. Cases with low anxiety and avoidance scores are classified as having a secure attachment style. People with this attachment style can make and maintain stable relationships with adult romantic partners, while those with the other three styles typically have relationship difficulties. Cases with high interpersonal anxiety and low avoidance scores are classified as having a fearful attachment style. Interpersonal anxiety leads these people to consistently demand excessive proximity and closeness from their partners. Cases with high interpersonal avoidance and low anxiety scores are classified as having a dismissive attachment style. Such people insist on excessive emotional distance without experiencing interpersonal anxiety. Cases with both high anxiety and avoidance scores are classified as having a preoccupied attachment style. Such people show aspects of both the fearful and dismissive patterns. In the ECRI, seven point likert scale response formats are used for all items ranging from 1=Disagree strongly to 7=Agree Strongly. The anxiety and avoidance dimensions have good internal consistency reliability with alphas greater than 0.9. The scale ECRI was developed from a pool of over 600 items identified in a review of 14 self-report measures of adult attachment. The avoidance and anxiety factors were identified by factor analyses, so there is evidence for the construct validity of the scale. In comparison to Bartholomew and Horowitz's (1991) widely used measure of adult attachment, the ECRI is more conservative in classifying cases as having secure a attachment style and has stronger associations in predicted directions with measures of attachment related emotions, thoughts and behaviours regarding touch and sexuality in adult romantic relationships.

The Parental Bonding Instrument

The Parental Bonding Instrument is a 25 item questionnaire designed to measure recollections of parent-child relationships (Parker, Tupling & Brown, 1979). The scale yields scores on two bi-polar factors, caring and over-protectiveness. The caring scale assesses a person's retrospective perception of affection, emotional warmth, empathy and closeness in relationships with parents on the one hand, and emotional coldness, indifference, and neglect on the other. Scoring highly on this scale represents the receipt of high levels of emotional care from that parent. The over-protectiveness scale assesses retrospective perception of parents' promotion of their child's independent behaviour and the development of autonomy on the one hand and parental control, over-protection, intrusion, excessive contact, infantilization, and the prevention of independent behaviour on the other. Low scores on this scale represent optimal parenting. Respondents completed two copies of the PBI to allow a measure of their perception of their relationship with each parent to be obtained. The PBI has well established reliability and a range of studies attest to its validity.

The Revised UCLA Emotional Loneliness Scale

This is a reliable and valid 20-item inventory derived to detect variations in emotional loneliness and social isolation that occurs in everyday life (Russell, Peplau, & Cutrona, 1980). A 4 point Likert response format is used for all items. The scale has high internal consistency reliability (alpha =0.9).

The Nowicki-Strickland Locus of Control Scale

This is a 40 item reliable and valid instrument which provides a measure of the extent to which respondents believe events are contingent on their behaviours and the extent to which they believe events are controlled externally (Nowicki, 1976). A Yes-No response format is used for all items. Low scores reflect an internal locus of control. Better adjustment is associated with more internal scores on this dimension.

Novaco Anger Scale

This is a 73 item questionnaire which yields a comprehensive assessment of cognitive, affective and behavioural aspects of anger and the type of situations that provoke anger (Novaco, 1996). A three or four point response format is used for all items. The NAS yields scores for overall anger reactions, anger reactions in the cognitive domain, the arousal domain and the behavioural domain; and anger provoking situations. In the present study, scores for these five dimensions will be reported. The anger reaction scale is based on summary scores from the cognitive, arousal and behavioural domains. The cognitive domain score reflects aspects of the cognitive mediation of anger such as focusing on anger provoking cues, appraising situations antagonistically, preoccupation with anger provoking experiences, and interpreting ambiguous situations in a hostile way. The arousal domain score reflects physiological arousal when angry. Included here is the extent to which anger-related physiological arousal typically exceeds the individual's ability to control it, the duration of anger episodes, physical tensions that may accompany anger, and the tendency to be annoyed by minor events. The behavioural domain score reflects overt behavioural responses when angry such as impulsive aggressive behaviour without consideration of its consequences, the use of aggressive language, the use of physical aggression, and the displacement of anger onto others. The anger producing situations score reflects perceived sources of anger including disrespectful treatment, unfairness or injustice, frustration or interruption, annoying traits of others and incidental annoyances. These five main scales of the NAS have reliability of 0.9 (O'Halloran et al, 2002). It is worth noting that the NAS also yields scores on 17 narrow-band subscales which reflect highly specific aspects of anger reactions or specific anger eliciting situations. However, the reliability of these narrow-band scales is limited.

Personal Reaction Inventory

The Personal Reaction Inventory is a 20-item social desirability response set scale (Beckett, Beach, Fisher, & Fordham,1994). A 5 point Likert response format is used for all items. The scale evaluates respondents' tendency to respond to self-report items so as to represent themselves in a positive light. To evaluate the extent to which self-report data were contaminated by a social-desirability response set, scores on the Personal Reaction Inventory were correlated with all self-report dependent variables. Where low correlations were obtained it was concluded that self-report data were valid insofar as they were largely uncontaminated by a social-desirability response set.

Demographic Questionnaire

A demographic questionnaire was used to record data on offence status, literacy based on educational level, age, and socio-economic status (SES). SES was determined using questions and response codes from Census '96 (Central Statistics Office, 2002). For offenders, SES was based on their occupational situation prior to imprisonment.

PROCEDURE

Ethical approval to conduct the study was first obtained from involved agencies. Members of child sexual offender group were all individuals who volunteered to complete a prison-based sex offender treatment programme. Data on this group were collected as part of pre-treatment assessment. Based on inclusion and exclusion criteria outlined in the participants section above, in the majority of cases violent and non-violent prisoners were identified from prison administrative records. Since previous criminal records were not available for all prisoners, decisions about the inclusion and exclusion of some cases were based on a combination of information from designated experienced prison officers and prison records. An explanation of the study was given to all potential participants before inviting them to sign a consent form. Offenders were informed that participation would not affect their treatment or privileges within the prison system. Offenders completed all measures seated in groups of four or less men. They were seated so as to ensure privacy, and were ensured of the confidentiality of their results. Community participants who were recruited from the research participants panel of Trinity College Dublin also completed the measures in groups of four or less, while those obtained through the vocational training group and the wholesale company completed the measures in their own time. The community participants each received 10 Euro in return for participating in the study.

RESULTS

DATA MANGEMENT

Data were verified and analysed with SPSS version 10 for Windows.

Missing data

The PBI was only completed by the child sex offender and community control groups. For all scales and subscales, where data were missing for less than 10% of items, missing scores were estimated by pro-rating. Where data were missing for more than 10% of items, the case was eliminated from analyses of that variable and reduced group Ns arising from this procedure are mentioned in table footnotes.

Categorical data

The significance of intergroup differences in the distributions of categorical data was assessed with chi square tests followed by the inspection of standardised residuals. Where the standardised residual in a contingency table cell exceeded an absolute value of 2, this was interpreted as indicating that there was a significant difference between the observed and expected values in that cell and so it contributed significantly to the value of the observed chi square.

Numerical data

For numerical data, one-way analyses of variance followed by post-hoc comparisons were conducted to evaluate the statistical significance of intergroup differences. T-tests were conducted where only two groups were compared. For those variables where data were not normally distributed, transformations were

conducted to normalise distributions and analyses conducted on these transformed data (Newton & Rudestam, 1999). Since the results of these analyses did not differ substantially from analyses of raw data, only the analyses of raw data are reported. Non-parametric tests were conducted in those instances where data did not meet the assumptions of normality of distribution or homogeneity of variance, despite attempts at transformation. Since the results of these analyses did not differ substantially from the results of the parametric tests only the parametric test results are reported below.

Baseline inter-group differences

The child sexual offenders and community controls were significantly older than violent and non-violent offenders and the community control group contained a greater proportion of members in the lower professional and semi-skilled categories. To check whether these significant baseline differences unduly biased the results of the ANOVAs, ANCOVAS were conducted for those dependent variables which correlated significantly ($p<.05$) with age or SES. In these analyses SES was recoded to have three values (3=high and low professional and non-manual; 2=manual skilled and semi-skilled; 1=unskilled,own account, agricultural and other). The following 5 of 13 numerical dependent variables had significant correlations with age: loneliness ($r=.3$); anger reactions to provocation ($r=.4$); anger reactions in the cognitive ($r=.4$), arousal ($r=.4$), and behavioural ($r=.4$) domains; and anger producing situations ($r=.2$). The following 3 variables had significant correlations with SES: locus of control ($r=.2$), and anger reactions in the cognitive ($r=.3$) and arousal ($r=.2$) domains. Results of the ANCOVAs were similar to those of the ANOVAs so only the latter are reported below, and it may be concluded that baseline age and SES intergroup differences did not unduly bias the results of the study.

Validity of self-report data

An important concern is the validity of the self-report data used in this study and the extent to which it was contaminated by a social-desirability response set. To evaluate this possibility, a measure of social desirability response set (the total score from the Personal Reaction Inventory) was correlated with all 12 self-report dependent variables. These correlations ranged in size from .01 (PBI-Maternal Care) to .2 (Anger reactions in the behavioural domain). Thus, in no instance did social desirability response set account for more than 4% of the variance in a dependent variable. Thus it may be concluded that self-report data were largely uncontaminated by a social-desirability response set.

ATTACHMENT STYLE AND PARENTAL BONDING

From Table 2 it may be seen that compared with non-violent offenders and community controls, the child sexual offenders reported significantly greater interpersonal anxiety and avoidance on the two dimensional scales of the ECRI and their scores did not differ significantly from those of the violent offender group.

A chi square analysis of the distribution of cases across the four attachment style categories within each of the four groups presented in Table 2 revealed two significant findings. First, compared with non-violent offenders, violent offenders and community controls, the child sex offender group contained a significantly lower proportion of cases with a secure attachment style. Only 7% of the child sex offender

group had a secure attachment style compared with 30-45% of the other three groups. So the three comparison groups contained in excess of 4 times more securely attached cases than the child sex offender group. The second significant finding was that within the child sex offender group, the proportion of cases with a fearful attachment style was significantly greater than the proportions with the other three attachment styles. 59% of the child sex offender group had a fearful adult attachment style. This was more than 8 times as many as had a secure attachment style.

From Table 3 it may be seen that the child sex offender and community control groups differed significantly in their PBI profiles. Compared with community controls, the child sex offender group reported significantly lower levels of maternal and paternal care and significantly higher levels of maternal and paternal overprotection during their childhood.

Summary. A fearful adult attachment style characterised most members of the child sex offender group and a secure adult attachment style was 4 times less common in this group than the other three groups. Compared with community controls, the child sexual offender group reported significantly poorer relationships with their mothers and fathers.

PERSONAL FUNCTIONING

From Table 4 it may be seen that compared with all three comparison groups, the child sexual offenders reported significantly more emotional loneliness and a more external locus of control. Also, the violent offender group were found to have a more external locus of control compared with community controls. This difference was statistically significant.

On the NAS the violent offender group obtained significantly greater mean scores for overall anger reactions to provocation than the non-violent offender and community control groups. The violent offender group also obtained significantly greater mean scores for anger reactions in the cognitive, arousal and behaviour domains than the community control group. For anger reactions in the cognitive domain, mean scores for the child sex-offenders and non-violent offenders were significantly less than those of violent offenders and significantly greater than those of community controls. For anger reaction in the behavioural domain, mean scores for the child sex-offenders and non-violent offenders were significantly less than those of the violent offenders and did not differ from those of community controls. Intergroup differences in mean scores on the anger producing situations scale of the NAS did not occur.

Summary. With respect to personal functioning the child sexual offenders where characterised by more loneliness and a more external locus of control than the other three groups and their anger management profile more closely approximated those of non-violent offenders and community controls than that of violent offenders.

CORRELATES OF ATTACHMENT STYLE

To evaluate the psychosocial correlates of attachment styles, an ancillary analysis was conducted in which cases were classified into four attachment style groups on the basis of their ECRI scores and compared on measures of emotional loneliness, locus of control and anger management. (Because PBI data were available for only the child sex offender and community control groups, data from this instrument were omitted from this set of analyses in which the four attachment style groups were profiled.)

The mean scores of the 4 attachment style groups for variables on which they differed significantly are presented in Table 5 along with the results of ANOVAs and post-hoc comparisons. From the table it is clear that groups with secure and fearful attachment styles had distinctly different profiles. Compared with the securely attached group, the fearful group showed greater emotional loneliness, a more external locus of control, and greater anger management difficulties. These difficulties included greater anger reactions to provocation, greater maladaptive cognitive anger reactions and greater uncontrolled arousal anger reactions.

The psychosocial profiles of the groups with preoccupied and dismissing attachment styles fell between those of the groups with secure and fearful attachment styles. With respect to emotional loneliness, the groups with preoccupied and dismissing attachment styles resembled the group with a fearful attachment style. With respect to locus of control, the groups with preoccupied and dismissing attachment styles resembled the group with a secure attachment style. Finally, with respect to anger management, the groups with preoccupied and dismissing attachment styles did not differ significantly from the groups with either secure or fearful attachment styles.

DISCUSSION

The hypotheses that the child sex offenders would show a greater rate of fearful attachment style, greater loneliness, a more external locus of control and abnormal anger management were supported by the results of this study. Rates of preoccupied attachment did not differ across groups, so this hypothesis was not supported. A summary of the profiles we found is given in Table 6. A secure adult attachment style was less common and a fearful attachment style more common in the child sex offender group than in any of the other three groups and the majority of sex offenders had a fearful adult attachment style. Compared with community controls, the child sex offender group reported significantly lower levels of maternal and paternal care and significantly higher levels of maternal and paternal overprotection during their childhood. Compared with all three comparison groups, the child sexual offenders reported significantly more emotional loneliness and a more external locus of control. With respect to anger management, the child sexual offenders' profile more closely approximated those of non-violent offenders and community controls than that of violent offenders, although their cognitive anger reactions were more abnormal than those of community controls.

In an ancillary analysis, psychosocial profiles of groups with different attachment styles were established. Groups with secure and fearful attachment styles had distinctly different profiles with the latter showing greater emotional loneliness, a more external locus of control, and greater anger managment difficulties than the former. The profiles of groups with preoccupied and dismissing attachment styles fell between those of the groups with secure and fearful attachment styles.

This study had a number of limitations. First, all four groups in this study were convenience samples and so were not representative of the populations from which they were drawn. The child sexual offender group included sex offenders due to be released within 12-18 months who volunteered to enter a treatment programme. The other offender groups included literate violent and non-violent offenders who consented to participate in the study. Second, the groups were not matched for age or SES. However, results of ANCOVAs in which age and SES were included as covariates suggested that these baseline differences did not unduly bias results. Third, most of the dependent variables were based on self-reports and so the validity of variables based on these self-reports may have been compromised by response set. When we correlated

a measure of social desirability response set with all self-report dependent variables, only negligible correlations were found indicating that the self-report data were uncontaminated by a social-desirability response set. Fourth, our data set was not complete and for some scales a number of participants had missing data. In view of these limitations and our attempts to deal with them we are fairly confident that the profiles we found in this investigation are valid for the groups we studied.

The results of the present study support Ward et al's (1995) theory which posits a unique association between child sexual offending and fearful or preoccupied styles of adult attachment. The results of the present study are also consistent with the results Ward et al's (1996) study. In the present study, 59% of child sex offenders had a fearful attachment style, while a preoccupied attachment style was the second most frequently observed category of attachment, with 21% of child sex offenders showing this pattern.

The low maternal and paternal care and high over-protection profiles of child sex offenders found in this study is consistent with Marshall's theory and the results of many previous studies (e.g. Graves et al., 1996; Jonson –Reid & Way, 2001; Levant & Bass, 1991; Marshall, Serran & Cortini, 2000; Smallbone & Dadds, 1998, 2000; Tingle, Barnard, Robbins, Newman, & Hutchinson, 1986). Although the constructs measured in these studies differ from those evaluated by the PBI in the present study, sufficient overlap exists to draw parallels between the findings.

The finding that child sex offenders showed more emotional loneliness than the violent offenders, non-violent offenders and community controls is consistent with Marshall's theory that insecure adult attachment styles compromise sex offenders capacity to make and maintain satisfying intimate relationships and so lead to loneliness. The results of the present study are also consistent with findings previous studies on loneliness in sex offenders (e.g. Bumby & Hansen, 1997; Bumby & Marshall, 1994; Garlick, Marshall, & Thornton, 1996; Marshall, 1989; Seidman, Marshall, Hudson & Robertson, 1994).

The finding that child sexual abusers had an external locus of control and so felt quite powerless to control significant sources of reinforcement within their environment is consistent with findings from two previous studies of non-juvenile child sex offenders (Beck-Saunder, 1995; Fisher et al, 1998) but not our study of juvenile child sex offenders (O'Halloran, Carr et al, 2002). It may be that adolescent offenders have a more internal locus of control than adult offenders because they have not experience repeated failures in their attempts to control their lives. It is also particularly noteworthy that in the present study child sex offenders reported a more external locus of control than violent offenders. That violent offenders typically have been found to have a high external locus of control is well documented (e.g. Hollin & Wheeler, 1982).

The finding that the anger management profile of child sexual offenders' more closely approximated those of non-violent offenders and community controls than that of violent offenders who tend to show more deviant profiles is consistent with that of other studies (e.g. Dalton, Blain & Bezier, 1998; Hudson & Ward, 1997; O'Halloran, Carr et al., 2000; Seidman, Marshall, Hudson, & Robertson, 1994). The finding that the cognitive anger reactions, but not the behavioural reaction of child sex offenders were more abnormal than those of community controls is consistent with Marshal and Barbaree's (1990) proposal that child sexual offenders experience more anger than non-offenders but suppress the expression of that anger.

Because this study is the first Irish study to show a unique relationship between insecure attachment and sexual offending (compared with violent and non-violent offending) it requires replication and extension in a series of further studies. With respect to the independent variable, it would be valuable to expand the

design to include subgroups of child sex offenders such as intrafamilial and extrafamilial offenders; other types of sexual offenders such as rapists; and other control groups such as psychiatric controls. With respect to the dependent variables, it would be useful to include other measures of the same constructs. For example to include both the ECRI and an interview measure of adult attachment style. With respect to the completeness of the design and the degree of experimental control, it would be useful to administer the PBI to all groups in future studies and to more closely match the groups on demographic variables, notably age and SES.

The findings of this study have implications for assessment and treatment of child sex offenders and for prevention of child sexual abuse. This is one of the first studies in which the discriminative validity of measures of locus of control, emotional loneliness and anger management from the Adult Sex Offender Assessment Pack (Beckett et al, 1996) has been tested across groups of child sex offenders, non-violent offenders, violent offenders and community control groups. The results provide support for the discriminative validity of the measures. With respect to assessment, these results point to the importance of including these measures along with measures of adult attachment style in pre- and post-treatment assessment protocols for child sex offenders. With respect to intervention, these findings clearly suggest that a critical component of any comprehensive sex offender treatment programme is to help offenders develop the skills for making and maintaining intimate relationships and strategies for coping with interpersonal anxiety (Marshall, Anderson & Fernandez, 1999; Middleton, Leyland & Baim, 2001). With respect to prevention, the finding that child sex offenders as children had problematic relationships with their parents point to the importance of early intervention in families at risk for parenting difficulties (Carr, 2002).

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Table 1. Demographic characteristics of three types of offenders and community controls.

			Child Sex Offender (N=29)	Non-Violent Offender (N=30)	Violent Offender (N=30)	Community Control (N=30)	F or Chi		Group Differences
Age	**Mean**		40.0	29.3	24.0	39.8	13.1	**	CSO=C>NVO=VO
	SD		12.4	11.0	3.8	17.1			
	Range		19-60	17-55	19-31	17-68			
SES	**High Professional**	%	7	0	0	10	55.1	**	
	Low Professional	%	10	10	0	30			C>CSO=NVO=VO
	Non-Manual	%	7	0	3	3			
	Manual-Skilled	%	33	40	17	10			
	Semi-skilled	%	13	0	7	27			C>CSO=NVO=VO
	Unskilled	%	17	23	47	10			
	Own account workers	%	0	7	0	3			
	Agricultural workers	%	0	0	3	0			
	Others	%	13	20	23	7			

Note: SES=Socio economic status and is based on Irish Central Statistics Office Classification System (CSO, 2002). Group differences are based on post-hoc comparisons for age and inspection of standarized residuals for SES and all differences are significant at p<.05. CSO=Child sex offender. NVO=Non-violent offender. VO=Violent offender. C=Control. **p<.01.

Table 2. Attachment style of three types of offenders and community controls.

			Child Sex Offender (N=29)	Non-Violent Offender (N=30)	Violent Offender (N=30)	Community Control (N=30)	F or Chi		Group Differences
Attachment dimensions	**Anxiety**	M	4.2	3.4	3.8	3.2	4.16	**	CSO>NVO=C
		SD	1.1	1.2	1.2	1.4			CSO=VO
	Avoidance	M	3.8	2.8	3.0	2.3	4.01	**	CSO>NVO=C
		SD	0.9	1.2	1.1	1.4			CSO=VO
Attachment style categories	**Secure**	%	7	45	30	40	20.05	*	NVO=VO=C>CSO
	Fearful	%	59	17	27	27			CSO>NVO=VO=C
	Preoccupied	%	21	17	30	13			
	Dismissive	%	14	21	13	20			
	Style differences within groups		F>P=D>S						

Note: Attachment dimensions and attachment style categories is based on scores on the Experiences in Close Relationships Scale (Brennan, Clark & Shaver, 1998. Group differences and style differences within groups are based on post-hoc comparisons for attachment dimensions and inspection of standarized residuals for categories and all differences are significant at p<.05. CSO=Child sex offender. NVO=Non-violent offender. VO=Violent offender. C=Control S=Secure. F=Fearful. P=Preoccupied. D=Dismissive. * p<.05. **p<.01.

Table 3. Parental care and overprotection of child sex-offenders and community controls.

Parental Bonding		Child Sex Offender Group (N=29)	Community Control (N=29)	t
Maternal Care	M	17.1	27.4	6.39***
	SD	4.46	7.46	
Maternal Overprotection	M	20.5	14.2	3.68***
	SD	4.29	8.22	
Paternal Care	M	17.1	22.2	2.85 **
	SD	4.45	8.54	
Paternal Overprotection	M	24.2	11.0 †	8.39***
	SD	5.43	6.59	

Note. All scores are from the Parental Bonding Instrument (Parker, et al, 1979). ** p<.01. *** p<.001. †N = 28.

Table 4. Loneliness, locus of control and anger management of three types of offenders and community controls.

Variable		Child Sexual Offender (N=29)	Non-Violent Offender (N=30)	Violent Offender (N=30)	Community Control (N=30)	F	Group Differences
Loneliness	M	59.8	39.5	42.5	37.2	38.05***	CSO>NVO,VO,C
	SD	4.6	8.8	8.5	9.4		
Locus of Control	M	20.2	14.0	16.2	13.2	11.65***	CSO>NVO,VO,C
	SD	4.2	5.8	4.0	5.9		VO>C
Anger reactions to provocation	M	90.3	87.0	98.4	86.2†	5.02**	VO>NVO=C
	SD	10.7	14.0	17.0	18.3		
Anger reactions in the cognitive domain	M	31.4	31.8	33.7	29.7†	5.07**	VO>CSO=NVO>C
	SD	2.9	4.6	5.6	4.7		
Anger reactions in the arousal domain	M	30.7	28.3	31.8	27.4I	4.05**	VO>C
	SD	4.4	4.9	6.0	6.8		
Anger reactions in the behavioural domain	M	28.3	27.3	32.8	27.5†	5.68***	VO>CSO=NVO=C
	SD	4.9	6.5	7.7	5.3		
Anger producing situations	M	59.3I	58.0†	62.8	60.82†	0.68	
	SD	12.1	13.1	15.5	13.2		

Note: Loneliness scores are from the Revised UCLA loneliness scale (Russell et al, 1980). Locus of control scores are from Nowicki-Strickland LOC scale (Nowicki, 1976). Anger scores are from the Novaco Anger Scale (Novaco, 1994). **p<.01. *** p<.001. I N=29. †N=28. CSO=Child sex offender. NVO=Non-violent offender. VO=Violent offender. C=Control

Table 5. Loneliness, locus of Control and anger management associated with different attachment styles.

Variable		Secure (N=36)	Fearful (N=38)	Preoccupied (N=24)	Dismissing (N=20)	F	Group Differences
Emotional Loneliness	M	36.81	50.84	45.21	46.60	2.75*	F=P=D>S
	SD	9.00	9.69	13.29	11.88		
Locus of Control	M	13.50	19.00	15.33	15.10	6.89***	F>S=P=D
	SD	5.14	5.24	5.26	6.06		
Anger reactions to provocation	M	83.94	93.70	94.17	91.35	3.14*	F>S
	SD	14.44	15.60	14.34	18.30		
Anger reactions in the cognitive domain	M	29.64	32.97	32.44	31.30	3.68**	F>S
	SD	4.36	4.69	4.08	4.95		
Anger reactions in the arousal domain	M	27.31	31.41	30.75	28.50	3.86**	F>S
	SD	5.43	5.61	5.57	5.60		

Note: Loneliness scores are from the Revised UCLA loneliness scale (Russell et al, 1980). Locus of control scores are from Nowicki-Strickland LOC scale (Nowicki, 1976). Anger scores are from the Novaco Anger Scale (Novaco, 1994).
*p<.05; **p<.01; ***p<.001. S=Secure. F=Fearful. P=Preoccupied. D=Dismissive.

Table 6. Profiles of child sex offenders, non-violent offenders, violent offenders and community controls

Variable	Child Sexual Offender	Non-Violent Offender	Violent Offender	Community Control
Absence of secure attachment style	++	0	0	0
Fearful attachment style	+	0	0	0
Interpersonal anxiety	++	0	++	0
Interpersonal avoidance	++	0	++	0
Lack of maternal care	++	*	*	0
Maternal overprotection	++	*	*	0
Lack of paternal care	++	*	*	0
Paternal overprotection	++	*	*	0
Loneliness	++	0	0	0
External locus of control	++	0	+	0
Aggressive anger reactions to provocation	0	0	++	0
Maladaptive cognitive anger reaction	+	+	++	0
Uncontrolled arousal anger reactions	0	0	++	0
Aggressive behavioural anger reations	0	0	++	0

Note: ++ =group has high level of this characteristic. + =group has moderately high level of this characteristic.0=group has low level of this characteristic. *=variable was not measured for this group, so the status of the group on the variable is unknown.